

the boating environment. The final report is available upon request to the U.S. Coast Guard Infoline at 1-800-368-5647. (\$1,809,144).

**Boating Accident Report Database (BARD):** A contract has been awarded to enhance the capability of all States and the Coast Guard for the successful electronic exchange, management, and reporting of recreational boating accident report data using the BARD software application. This contract provides for software module development, software module testing, applicable rework, implementation, maintenance, and technical support for the user community in the 50 States, five Territories, and the District of Columbia. (\$2,953,755)

**State Incident Notification:** The Coast Guard Search and Rescue Management Information System (SARMIS) software has been modified to electronically notify the relevant State boating law administrators regarding any fatal recreational boating incident cases to which the Coast Guard responds. The intent of this notification is to ensure that these cases are captured in the accident report data submitted by the State boating law administrators to the Boating Accident Report Database (BARD). (\$12,678)

**Articulated Mannequins/Computer Simulation Model:** The objective of this contracted program is to improve the safety of recreational boaters by fostering developmental technology for improved personal flotation devices (PFDs). This program is furthering development of flotation mannequins and a water forces computer simulation program to promote the rapid, objective evaluation of different PFD designs on various body types that are representative of the recreational boating population. The computer simulation program will be validated through the use of a family of anthropomorphic, articulated mannequins. Under the contract to develop the articulated mannequins and computer simulation model, a male model has been built and is almost perfected. Currently, a female and a child mannequin are being developed. The development of a computer simulation program will facilitate evaluation of the effectiveness of new and unique PFD designs. (\$814,341)

**Risk-Based Personal Flotation Device Approval Process:** This ongoing effort will improve the approval process for personal flotation devices (PFDs) by developing a risk-based compliance system that is based on an objective Life Saving Index. This index will provide a formal structure and consistency to the process for accepting new approaches to

designing devices for drowning prevention. The risk-based process identifies critical factors for evaluating PFD lifesaving potential and defines the minimum level of performance necessary for approval. (\$421,509)

**Carbon Monoxide Research:** The Office of Boating Safety has entered into a Memorandum of Agreement with the Department of Health and Human Services, U.S. Public Health Service, Federal Occupational Health Program, to continue investigation into identifying and classifying additional recreational boating carbon monoxide related deaths and injuries. (\$573,475)

**Houseboat Manufacturers Workshop/Conference Support:** Funding provided support services for a Coast Guard-sponsored gathering of the houseboat industry to explore potential design solutions to the carbon monoxide poisonings that have occurred on recreational houseboats. (\$17,030)

**Hull Identification Number (HIN) Economic Analysis:** This contracted effort provided the Coast Guard with a cost/benefit analysis on the effects of expanding the current 12-character HIN to a 17-character HIN for all newly constructed recreational boats. (\$47,626)

**Virtual Reality Personal Watercraft (PWC):** A virtual reality PWC was developed under contract to provide a platform to gather objective data on operator reactions to various scenarios. This information would otherwise be unobtainable or would require more costly methods and sources, due to the risk of injury to the operator as well as due to the difficulty of accurately replicating conditions for all operators. The virtual reality PWC is being used in various test scenarios to collect human factors data including the measurement of reactive movements and reaction time that will assist in making decisions or taking action to improve personal watercraft safety. The data from this effort will give greater insight into the human-machine interface related to PWC operation and will assist in the effort to attempt to reduce PWC accidents. (\$407,638)

**Knowledge Management System:** The first phase of a proposed three-phase contracted effort to develop a comprehensive Knowledge Management plan for automating office processes within the Office of Boating Safety was successfully completed. This phase provided the system requirements, potential applications and over-arching possible utility of the knowledge management system. Upon review of phase one analysis it was determined that the project should be terminated. This decision was based upon information obtained while performing

this segment. In addition, it was determined that with projected changing software systems within the federal government that it was in our best interest to wait until the new federal system was made available. The second and third phases will not be implemented until further federal direction is obtained. Phases two and three, if implemented, would install document imaging software to capture and fully automate product assurance and consumer files and provide support that will ultimately enhance efficiency in supporting customers, partners and stakeholders. This would provide quicker, more effective and efficient program oversight while providing customers with the ability to do business with the Coast Guard via web-based technology, thus enabling the Coast Guard to reduce the amount of paper transactions involved in servicing external customers. This system will assist in the electronic monitoring, storage and daily use of information and materials within the Office of Boating Safety. (\$431,890)

**Coast Guard Infoline/Office of Boating Safety Web Site:** Funding has been provided for both technological and educational enhancements to the toll-free Coast Guard Infoline and the Office of Boating Safety Web site to create a one-stop customer service center. The Infoline provides information about safety, regulations, communications, Coast Guard policy, and available material related to boating safety issues. Additionally, this effort provides a complete interactive recreational boating safety Web site that offers the public and boating safety agencies and organizations real-time information on every aspect of recreational boating safety. One of the goals of this program is to create a one-stop customer service center for all users. (\$859,798)

**Federal Requirements Publication:** A customer-friendly "Federal Requirements and Safety Tips for Recreational Boats" publication was developed based on easy-to-read, high visibility graphics, and with subject-specific safety tips that promote high retention by the reader. Both hard copy and electronic interactive versions have been created for the public. The enhanced Federal Requirements brochure is being widely distributed, and in addition, can be downloaded from the Office of Boating Safety Web site (<http://www.uscgboating.org>). (\$427,000)

**Emergency Radio Call Procedures Decal:** An emergency radio call procedures decal was produced and disseminated that provides the recreational boater with the proper